

REMARKS

Claims 1-6 and 8-24 were pending in the Application. Claims 1 and 16 are independent claims. Claims 1-6 and 8-15, and 17-24 depend from independent claims 1 and 16, respectively. Claims 1, 5, 6, 16 and 18 are currently amended. Claims 25 and 26 are new. Applicant respectfully requests reconsideration of the application in light of the above amendments and the following remarks.

Drawing Objection

In point 4 on pages 3-4 of the Office Action, Figures 1-9 were objected to because they were hard to read and understand. The Applicant respectfully traverses the objection, however, in order to advance prosecution in the application, the Applicant has submitted with this response, formal drawings in compliance with 37 C.F.R. 1.121(d). The Applicant believes the formal drawings have overcome the noticed minor informalities and therefore respectfully requests that the objection be withdrawn.

Rejections Under 35 U.S.C. §112, Second Paragraph

In points 5-7 on page 4 of the Office Action, claims 5 and 6 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Office Action states that there is insufficient antecedent basis for the limitation "said transmitting." The Applicant has amended claims 5 and 6 to correct the antecedent basis issue. The Applicant believes the amendments to claims 5 and 6 have overcome the rejections under 35 U.S.C. §112, second paragraph, and therefore respectfully requests that the rejections be withdrawn.

Rejections Under 35 U.S.C. §103(a) – Saunders and Benyassine

In points 8-25 on pages 4-12 of the final Office Action, independent claims 1 and 16 and dependent claims 3-4, 7, 9-11, 13-15 and 20-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders (Real-Time Discrimination of Broadcast Speech/Music) in view of Benyassine (U.S. Patent No. 6,694,293). The Applicant respectfully traverses the rejections for at least the following reasons.

Regarding claim 1, the Applicant respectfully submits that the combination of Saunders and Benyassine fail to teach, suggest, or disclose, for example, “analyzing selected audio signal components,” as set forth in Applicant’s amended, independent claim 1.

The Office Action states that Saunders discloses “analyzing selected audio signal components (The first step is to measure the ZCR of the signal over a 2.4 second segment of the data; page 994, column 2, line 43).” (Office Action, Point 11, Page 5). However, Saunders’ audio signal 2.4 second segment is different than Applicant’s audio signal components, as set forth in Applicant’s amended, independent claim 1. One skilled in the art would recognize the difference between a segment (i.e., time-based) and a component (i.e., frequency-based) of an audio signal.

Regarding claim 16, the Applicant respectfully submits that the combination of Saunders and Benyassine fails to teach, suggest or disclose, for example, “at least one audio signal component reducer for selecting a reduced number of audio signal components for analysis,” as set forth in Applicant’s amended, independent claim 16.

As mentioned above with regard to claim 1, the 2.4 second segment of Saunders is different than Applicant’s selected audio signal components. Additionally, nowhere in Saunders or Benyassine is there any mention of “at least one audio signal component reducer,” as set forth in Applicant’s amended, independent claim 16.

Therefore, for at least the above stated reasons, Applicant respectfully submits that the Saunders reference and the Benyassine reference, alone or in any combination, fail to teach, suggest, or disclose Applicant's invention as set forth in independent claims 1 and 16. The Applicant believes that claims 1 and 16 are allowable over the combination of Saunders and Benyassine. Applicant respectfully submits that claims 1 and 16 are independent claims, and that claims 2-6, 7-15 and 26, and 17-25 depend either directly or indirectly from independent claims 1 and 16, respectively. Because claims 2-6, 7-15 and 26, and 17-25 depend from claim 1 and 16, respectively, Applicant respectfully submits that claims 2-6, 7-15 and 26, and 17-25 are allowable over the combination of Saunders and Benyassine, as well. The Applicant respectfully requests, therefore, that the rejection of claims 1, 3, 4, 7, 9-11, 13-16 and 20-24 under U.S.C. §103(a), be withdrawn.

Rejections Under 35 U.S.C. §103(a) – Saunders, Benyassine and Carey

In points 26-28 on pages 13-14 of the final Office Action, dependent claims 2 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders in view of Benyassine and further in view of Carey (A Comparison of Features for Speech, Music Discrimination). The Applicant respectfully traverses the rejections for at least the following reasons.

Carey fails to remedy the deficiencies of Saunders and Benyassine. Saunders, even if combined with Benyassine and Carey, is different from Applicant's independent claims 1 and 16. The proposed combination of Saunders in view of Benyassine and further in view of Carey fails to disclose, among other things, "analyzing selected audio signal components," and "at least one audio signal component reducer for selecting a reduced number of audio signal components for analysis," as set forth in Applicant's independent claims 1 and 16, respectively.

Therefore, for at least the above stated reasons, Applicant respectfully submits that the Saunders reference, the Benyassine reference and the Carey reference, alone or in any combination, fails to teach, suggest, or disclose Applicant's invention as set forth in claims 1 and 16. The Applicant believes that claims 1 and 16 are allowable over Saunders in view of Benyassine and further in view of Carey. Applicant respectfully submits that claims 1 and 16 are independent claims, and that claims 2-6, 7-15 and 26, and 17-25 depend either directly or indirectly from independent claims 1 and 16, respectively. Because claims 2-6, 7-15 and 26, and 17-25 depend from claim 1 and 16, respectively, Applicant respectfully submits that claims 2-6, 7-15 and 26, and 17-25 are allowable over the combination of Saunders, Benyassine and Carey, as well. The Applicant respectfully requests, therefore, that the rejection of claims 2 and 17 under U.S.C. §103(a), be withdrawn.

Rejections Under 35 U.S.C. §103(a) – Saunders, Benyassine and Pohlmann

In points 29-34 on pages 15-18 of the final Office Action, dependent claims 5, 6, 8, 18 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders in view of Benyassine and further in view of Pohlmann (Principles of Digital Audio). The Applicant respectfully traverses the rejections for at least the following reasons.

Pohlmann fails to remedy the deficiencies of Saunders and Benyassine. Saunders, even if combined with Benyassine and Pohlmann, is different from Applicant's independent claims 1 and 16. The proposed combination of Saunders in view of Benyassine and further in view of Pohlmann fails to disclose, among other things, "analyzing selected audio signal components," and "at least one audio signal component reducer for selecting a reduced number of audio signal components for analysis," as set forth in Applicant's independent claims 1 and 16, respectively.

Further, the Office Action states that “Pohlmann teaches that sampled audio must be passed through a low pass filter at the Nyquist frequency in order to prevent distortion called aliasing; page 30, prevention section. Therefore it would have been obvious to combine the sampling of Benyassine with the filtering of Pohlmann in order to prevent aliasing, and to provide a way to digitize the audio signal for analysis, coding and transmission.” (Office Action, Point 30, Pages 15-16). However, Pohlmann uses a low pass filter for anti-aliasing, not to reduce the amount of audio information to be analyzed. Further, nowhere in Saunders, Benyassine or Pohlmann is there any disclosure regarding using Pohlmann’s anti-aliasing filter prior to “analyzing the selected audio signal components,” as set forth in Applicant’s independent claim 1 or prior to using “a zero point counter for counting and recording zero point transitions encountered in analysis of the selected audio signal components,” as set forth in Applicant’s independent claim 16.

Additionally, the Office Action states that “Pohlmann teaches a decimator for selecting a reduced number of audio components for analysis. This is nothing more than resampling the audio signal [a]s noted many different sampling rates are used, devices cannot be connected when their sampling rates differ... For example, a 44.1kHz signal can be converted to 44.056kHz by removing one sample every 23ms; page 460, fi[r]st full paragraph. Therefore it would have been obvious to one of ordinary skill in the art to include the decimating as taught by Pohlmann with the system of Saunders and Benyassine in order to provide a method for being able to connect different devices with different sampling rates (Pohlmann page 460, first full paragraph).” (Office Action, Point 33, Pages 17-18). However, Applicant claims do not recite a method for being able to connect different devices with different sampling rates. Rather, Applicant’s claim 6 recites “selecting audio signal components prior to analyzing selected audio signal components, wherein said selecting audio signal components comprises passing the audio signal through a decimator, wherein every 1 in N audio signal components is transmitted and audio signal components between 1 and N are discarded.” Further, claim 18 recites “wherein the at least one audio signal component reducer comprises one or both of...a decimator.” Additionally, claim 19 recites “wherein the decimator selecting a reduced

number of audio components for analysis comprises the decimator selecting every 1 in N audio signal components to be transmitted and selecting the audio signal components between 1 and N to be discarded.” The combination of Saunders, Benyassine and Pohlmann fail to disclose a decimator that is used to select audio signal components prior to being analyzed. Rather, the combination of Saunders, Benyassine and Pohlmann disclose using a sample rate converter to match multiple devices differing sampling rates at transmission.

Because dependent claim 5, 6, 8, 18 and 19 depends, directly or indirectly, from independent claims 1 and 16, respectively, and because claims 1 and 16 are allowable over the proposed combination of references, Applicant asserts that the rejection of dependent claims 5, 6, 8, 18 and 19 are now moot. Applicant asserts that claims 5, 6, 8, 18 and 19 are also allowable over the cited references and requests that the rejection of claims 5, 6, 8, 18 and 19 under U.S.C. §103(a), be withdrawn.

Rejections Under 35 U.S.C. §103(a) – Saunders

In point 35 on pages 18-19 of the final Office Action, dependent claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders. The Applicant respectfully traverses the rejections for at least the following reasons.

Just as the combination of Saunders and Benyassine fails to disclose, among other things, “analyzing selected audio signal components,” as set forth in Applicant’s independent claim 1, Saunders alone also fails to disclose, among other things “analyzing selected audio signal components,” as set forth in Applicant’s independent claim 1.

Because dependent claim 12 depends, directly or indirectly, from independent claim 1, and because claim 1 is allowable over Saunders, Applicant asserts that the rejection of dependent claim 12 is now moot. Applicant asserts that claim 12 is also

allowable over the cited references and requests that the rejection of claim 12 under U.S.C. §103(a), be withdrawn.

New Claims

The present application adds new claim 25. New claim 25 depends directly or indirectly from independent claim 1. Thus, claim 25 is at least allowable for the reasons discussed previously with regard to claim 1. The Applicant also submits that claim 25 is independently allowable. New claim 26 depends directly or indirectly from claim 16. Thus, claim 26 is at least allowable for the reasons discussed previously with regard to claim 16. The Applicant also submits that claim 26 is independently allowable.

Final Matters

The Office Action makes various statements regarding former claims 1-6 and 8-24, 35 U.S.C. § 112, 35 U.S.C. § 103, the Saunders reference, the Benyassine reference, the Carey reference, the Pohlmann reference, one of ordinary skill in the art, etc. that are now moot in view of the previously presented amendments and/or arguments. Thus, the Applicants will not address all of such statements at the present time. However, the Applicants expressly reserve the right to challenge such statements in the future should the need arise (e.g., if such statements should become relevant by appearing in a rejection of any current or future claim).

Applicants reserve the right to argue additional reasons supporting the allowability of claims 1-6 and 8-26 should the need arise in the future.

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CONCLUSION

Applicant respectfully submits that claims 1-6 and 8-26 are in condition for allowance, and requests that the application be passed to issue.

Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

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Respectfully submitted,

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